

Serial No.: 10/027,623

Attorney Docket No.: 01P16145US

REMARKS

Upon entry of the instant Amendment, Claims 1-16 are pending. Claim 9 has been amended to more particularly point out Applicant's invention.

Claims 1-16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bontempi et al., U.S. Patent Application Publication No. 20020150092 ("Bontempi") in view of Koo, EP 1137238 ("Koo"). Applicant respectfully submits that the claimed invention is not taught, suggested, or implied by Bontempi or Koo, either singly or in combination.

As discussed in the Specification, a General Packet Radio Service (GPRS) system according to an embodiment of the present invention includes a mapping module at an SGSN (Serving GPRS Support Node) and a port assignment module at a GGSN (Gateway GPRS Support Node). The port assignment module can assign each IP address to a plurality of I/O ports (such as TCP ports). The mapping module maintains a mapping between IP address and I/O port for a given connection. In operation, all available TCP ports are assigned a given IP address until the ports available are exhausted. A new IP address is then assigned to the same ports.

Thus, claim 1 recites

a Serving GPRS support node (SGSN) including a mapping module and adapted to interface to a mobile station; and

a gateway GPRS support node (GGSN) including a port assignment module and adapted to couple to a packet network;

wherein said port assignment module is adapted to sequentially assign a plurality of IP addresses to same TCP ports and said mapping module is adapted to maintain a mapping between a particular port, an IP address, and a mobile station during a connection between said mobile station and said packet network;

claim 5 recites

a Serving GPRS support node (SGSN) adapted to interface to a plurality of mobile stations;

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a gateway GPRS support node (GGSN) adapted to couple to a packet network; and
means for assigning an IP address to a plurality of TCP ports such that a plurality of said mobile stations can simultaneously communicate with said packet network using said IP address over different ones of said TCP ports

claim 9 has been amended to recite

assigning multiple IP addresses to a same port in a GGSN;
transmitting packets from multiple mobile stations via said port; and
maintaining a mapping of IP addresses, ports, and mobile stations at an SGSN

and claim 13 recites

providing a Serving GPRS support node (SGSN) including a mapping module and adapted to interface to a mobile station; and
providing a gateway GPRS support node (GGSN) including a port assignment module and adapted to couple to a packet network;
wherein said port assignment module is adapted to sequentially assign a plurality of IP addresses to same TCP ports and said mapping module is adapted to maintain a mapping between a particular port, an IP address, and a mobile station during a connection between said mobile station and said packet network.

In contrast, Bontempi relates to a mobile network including a GGSN and an SGSN (FIG. 1). As acknowledged in the Official Action, however, Bontempi does not "disclose the port assignment module being adapted to sequentially assign a plurality of IP addresses to same TCP ports and the mapping module being adapted to maintain a mapping between a particular port, an IP address, and a mobile station during a connection between the mobile station and the packet network." Instead, Koo is relied on for allegedly disclosing a "network operator for assigning a plurality of IP addresses to same TCP ports."

Applicant notes that various of the claims recite that the SGSN include a mapping module and the GGSN includes a port assignment module. Even assuming the characterization of Koo in the Official Action is correct, nothing in either references

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hints that the SGSN and GGSN include such features. Indeed, it appears that in Koo, the gateway 100 (or network operator) itself provides any port and IP address information. That is, even if the operation of the gateway 100 were analogous to the GGSN (which provides, inter alia, port assignments) of the claimed invention, there is no analogue to the SGSN and its mapping module (which maps ports, IP addresses, etc.) of the claimed invention (or indeed, the combination thereof). Because neither Bontemp nor Koo provide the features or combination of features of the claims at issue, the Examiner is respectfully requested to reconsider and withdraw the rejection.

For all of the above reasons, Applicants respectfully submit that the application is in condition for allowance, which allowance is earnestly solicited.

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